



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,526	03/31/2004	Ashish Kumar Jain	P71465US00GP	6904
23378	7590	05/23/2006	EXAMINER	
BRADLEY ARANT ROSE & WHITE, LLP INTELLECTUAL PROPERTY DEPARTMENT-NWJ 1819 FIFTH AVENUE NORTH BIRMINGHAM, AL 35203-2104			SMITH, RICHARD A	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/814,526	JAIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	R. Alexander Smith	2859	

All participants (applicant, applicant's representative, PTO personnel):

(1) R. Alexander Smith. (3) \_\_\_\_\_

(2) Greg Peterson. (4) \_\_\_\_\_

Date of Interview: 19 May 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.  
If Yes, brief description: \_\_\_\_\_

Claim(s) discussed: 1-28.

Identification of prior art discussed: Self, Gibbs, Twamley, Ariesssohn, and Shepherd Jr.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

  
**RICHARD SMITH**  
**PRIMARY EXAMINER**

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Discussed the claims as rejected plus some of the prior art references that were cited. In a review of the faxed informal response submitted by Applicant on May 19, 2006, Examiner Smith noted that it was Twamley that was applied in the rejection for, roughly stated, as an overlay applied to a navigational display and not Ariessoehn. However, Ariessoehn, Twamley and Shepard Jr. disclose devices that hold overlays or other sheets in position over or onto navigational displays; mostly by the use of, relatively speaking, complex attachment means relative to that discussed by Applicant in the specification, e.g, suction cup, cling. The examiner noted that "a means for attachment" as added to the proposed amended claims in the informal response were not shown in the drawings and that the additional of such to the proposed amended claims appear to represent new issues and/or considerations.

Attachment: Proposed informal amendment with arguments for interview discussion purposes only.



ONE FEDERAL PLACE  
1819 FIFTH AVENUE NORTH  
BIRMINGHAM, AL 35203-2104  
205.521.8000 FAX 205.521.8800  
WWW.BRADLEYARANT.COM

---

**FACSIMILE**

---

**Date** May 19, 2006  
**Fax Operator**

---

**RECIPIENTS**

---

Name	Location	Phone	Fax
Examiner R. Alexander Smith	USPTO — Alexandria, VA	571-272-2251	571-273-2251

---

**FROM**

---

<b>Name</b>	Greg Peterson, Ph.D., J.D.	<b>Number of Pages</b> <u>10</u>
<b>Phone</b>	205-521-8084	Includes cover page. If you do not receive all pages, please call 205-521-8084 as soon as possible.
<b>E-Mail</b>	gpeterston@bradleyarant.com	
<b>Fax</b>	205-488-6084	

---

**MESSAGE**

---

Unless otherwise indicated or obvious from the nature of the transmittal, the information contained in this facsimile message is attorney privileged and confidential information intended for the use of the individual or entity named above. If the reader of this message is not the intended recipient or the employee or agent responsible to deliver it to the intended

recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this facsimile in error and are not sure whether it is privileged, please immediately notify us by telephone and return the original facsimile to us at the above address via the U.S. Postal Service at our expense. Thank you.

**INFORMAL RESPONSE TO OFFICE ACTION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Jain, Ashish Kumar and Miley, Gerald Lamar

**Serial No.:** 10/814,526

**Filed:** 03-31-2004

**Art Unit:** 2859

**Examiner:** Smith, Richard A.

**Title:** Navigational Assist System

**AMENDMENT**

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

Sir:

This paper is submitted in response to the office action mailed 2-22-2006

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks** begin on page 6 of this paper.

## INFORMAL RESPONSE TO OFFICE ACTION

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Currently Amended) A navigational assist system comprising a plurality of entry determining elements for determining an advised entry procedure into an entry environment, a means for attachment secured to one of said entry determining elements, said means for attachment removably securing the navigational assist system to the face of the system being associated with an appropriate navigational instrument forming a part of an aircraft and the entry determining elements being moveably secured to one another by a means for securing so that each entry determining element is rotatably moveably with respect to the others, each of the entry determining elements comprising at least one reference element for alignment of a directional heading associated with the entry environment with an appropriate navigational instrument to determine an initial orientation of an aircraft with the entry environment and each entry determining element being divided into a plurality of entry determining sectors, with each entry determining sector being associated with an entry determining label, the entry determining label informing a user of the advised entry procedure for the entry environment based on the initial orientation and where the proper entry designating sector with its associated entry determining label being displayed at the bottom of the entry determining element based on the initial orientation, thereby informing a user of the proper entry procedure for the entry environment based.
2. (Original) The system of claim 1 where the entry environment is selected from the group consisting of: a holding pattern and a runway traffic pattern.
3. (Original) The system of claim 2 where the entry determining elements are selected from the group consisting of: an entry determining element for determining the advised entry procedure for standard entry into a holding pattern, an entry determining element for determining the advised entry procedure for non-standard entry into a holding pattern, and an entry determining element for determining the advised entry procedure for entry into a runway traffic pattern.

## INFORMAL RESPONSE TO OFFICE ACTION

4. (Original) The system of claim 1 further comprising an entry plan designator associated with at least one of the entry designating labels.
5. (Original) The system of claim 4 where the entry plan designators provide the user with a visual representation of a maneuver required to enter the entry environment.
6. (Original) The system of claim 5 where the entry environment is selected from the group consisting of: a holding pattern and a runway traffic pattern.
7. (Currently Amended) A navigational assist disk system ~~associated with an appropriate navigational instrument forming a part of an aircraft~~ and comprising three entry determining elements and a means for attachment secured to one of said entry determining elements, said means for attachment removably securing the navigational assist disk system to the face of an appropriate navigational instrument forming a part of an aircraft, with two of the three entry determining elements being used to determine an advised entry procedure when the entry environment is a holding pattern and one of the three entry determining elements being used to determine an advised entry procedure when the entry environment is a runway traffic pattern, the three entry determining elements being moveably secured to one another by a means for securing so that each entry determining element is rotatably moveably with respect to the others, each of the entry determining elements comprising a reference element for alignment of a directional heading associated with the holding pattern or runway traffic pattern with an appropriate navigational instrument to determine an initial orientation of an aircraft and each entry determining element being divided into a plurality of entry determining sectors, with each entry determining sector being associated with an entry determining label, the proper entry designating sector with its associated entry determining label being displayed at the bottom of the entry determining element based on the initial orientation, thereby informing a user of the proper entry procedure for the entry environment based.
8. (Previously Presented) The system of claim 7 where the directional heading associated with the holding pattern is the outbound radial of the holding pattern and the directional heading associated with the runway traffic pattern is the runway heading.

## INFORMAL RESPONSE TO OFFICE ACTION

9. (Original) The system of claim 7 where one of the two entry determining elements to determine an advised entry procedure where the entry environment is a holding pattern is used for standard entry into the holding pattern and the other of the two is used for non-standard entry into a holding pattern.
10. (Original) The system of claim 9 where the entry determining elements to determine an advised entry procedure when the entry environment is a holding pattern each comprise a set of two lines bisecting said elements, one of said lines comprising the reference element, said two lines dividing the entry determining element into four entry designating sectors.
11. (Original) The system of claim 10 where the entry determining labels associated with one of the entry designating sectors informs the pilot a parallel entry procedure is advised, the entry determining labels associated with one of the entry designating sectors informs the pilot a teardrop entry procedure is advised and the entry determining labels associated with two of the entry designating sectors informs the pilot a direct entry procedure is advised.
12. (Original) The system of claim 7 where the entry determining element to determine an advised entry procedure when the entry environment is a runway traffic pattern comprises a line bisecting the element and comprising the reference element, said line dividing the entry determining element into two entry designating sectors.
13. (Original) The system of claim 12 where the entry determining labels associated with one of the entry designating sectors informs the pilot a left entry procedure is advised or a right entry procedure is advised.
14. (Original) The system of claim 7 further comprising at least one entry plan designator associated with at least one of the entry designating labels.
15. (Original) The system of claim 14 where each entry designating label is associated with an entry plan designator.
16. (Original) The system of claim 15 where the entry plan designators provide the user with a visual representation of a maneuver required to enter the holding pattern or the runway traffic pattern.
17. (Original) The system of claim 15 where each entry plan designator comprises a visually distinguishable feature.



## INFORMAL RESPONSE TO OFFICE ACTION

18. (Original) The system of claim 17 where the visually distinguishable feature is selected from the group consisting of line color, line configuration and a combination thereof.
19. (Original) The system of claim 7 where the entry determining elements each have a shape and the shape is selected from the group consisting of: a circle, an oval, a square, a rectangle, a triangle, a pentagon, a hexagon, other geometric shapes or a combination of the foregoing.
20. (Original) The system of claim 19 where the shape of each of the entry determining elements is the same.
21. (Original) The system of claim 19 where the shape of each of the entry determining elements is the different.
22. (Original) The system of claim 7 where the entry determining elements comprise a surface and each surface has a texture associated with at least a portion thereof, and the texture is selected from the group consisting of: a smooth texture, a rough texture and a ridged texture.
23. (Original) The system of claim 22 where the texture of each surface of the entry determining elements is the same.
24. (Original) The system of claim 22 where the texture of each surface of the entry determining elements is the different.
25. (Original) The system of claim 7 where the entry designating sectors have a visually distinguishable feature.
26. (Original) The system of claim 25 where the visually distinguishable feature is selected from the group consisting of: a color, a hatching pattern, a shading pattern and a combination of the foregoing.
27. (Original) The system of claim 7 where each entry designating label has a visually distinguishable feature.
28. (Original) The system of claim 27 where the visually distinguishable feature is selected from the group consisting of: a color, a line configuration and a combination of the foregoing.

## INFORMAL RESPONSE TO OFFICE ACTION

**REMARKS**

Applicants have amended claims 1-7. Support for this amendment can be found on lines 15-19 of page 3 of the specification. No new matter is introduced as a result of the claim amendments.

**Claim Rejections**Rejections under 35 USC 103(a)

The Examiner finally rejected all pending claims (1-28) under 35 USC 103(a) as unpatentable over US Patent No. 4,274,204 to Self (hereinafter the '204 patent) in view of US Patent No. 5,214,855 to Gibbs (hereinafter the '855 patent) and US Patent No. 2,588,433 to Twamley (hereinafter the '433 patent).

The Examiner characterized the '204 patent as disclosing a plurality of entry determining elements (a single card having standard and non-standard holding patterns on one side and landing patterns on the other side) being moveably secured together by a means for securing (a slotted frame secured to a compass rose). The operation of the device is described in column 4, lines 11-40 of the '204 patent. As discussed the user is required to undertake several manipulations of the device to determine the correct maneuvers for entry into a landing pattern or a holding pattern. For example, the user must determine what maneuver is required to be performed and select the proper side of the placard for reference. Next the user must determine which of the means representing an aircraft movement about a reference point to use. The user must then align a reference line with an appropriate heading on the compass rose. Finally, the user must visually extract the required compass headings from the compass rose for use in the maneuver. Such maneuvers require considerable attention of the pilot.

The Examiner stated that the '204 patent did not disclose the that each entry determining sector of the entry determining element be labeled in order to provide the user with the advised entry procedure; 2) that each entry plan designator comprise a visually distinguishable feature; 3) the entry determining elements being of different shapes; 4) the entry determining elements being of the same shape or different shapes; 5) the entry determining elements having a surface texture; 6) the system being associated with an appropriate navigational instrument of the aircraft; and 7) the plurality of entry determining elements being rotatably moveably secured together by a means for securing,

## INFORMAL RESPONSE TO OFFICE ACTION

the proper entry determining label being displayed at the bottom of the element based on the initial orientation information

The Examiner uses the '855 patent to provide a reference disclosing the system being associated with an appropriate navigational instrument forming a part of the aircraft (point 6 above). The '855 patent discloses a flight navigational apparatus that can be used to give information to the pilot regarding the aircraft's position. The operation of the device is in determining a correct holding pattern entry is given in column 10, lines 31-66. This description does not include removably securing the device to a navigational instrument of the aircraft. Furthermore, the description of the device itself does not include a means for attachment to removably secure the device to a navigational instrument of the aircraft as does the revised claims 1 and 7 of the current application. The '885 patent describes a lanyard 54 for hanging the device somewhere in the cockpit (column 8 lines 43-46). Therefore, the device of the '855 patent does not disclose a device that can be removably secured to the face of a navigational instrument or a device that comprises a means for attachment to accomplish this purpose.

The Examiner also states that the device of the '855 patent can be implemented on a computer. Even if this implementation is used, the resulting device would still not have the features described and claimed in claims 1 and 7 as amended.

Although not cited in the 103(a) rejection, the Examiner also referenced the 3,190,950 patent to Ariessohn (hereinafter the '950 patent). The '950 patent discloses a pictorial position display that is in fact a separate instrument in and of itself that can be positioned in the aircraft. The instrument receives electrical inputs from a navigational device of the aircraft but is not attached to the face of the navigational device in any way. Furthermore, the instrument of the '950 patent does not have a plurality of entry determining elements, but requires the use of only 1 map piece at a time. Each map piece must be precisely designed for the location of the aircraft in order to display the proper information.

The present disclosure describes a navigational assist system that is much simpler to use than those described in the art. The system of the present disclosure is designed to be removably secured to the face of a navigational instrument of the aircraft (see amended claims 1 and 7) using the means for attachment secured to one of the entry

## INFORMAL RESPONSE TO OFFICE ACTION

determining elements. The pilot removably secures the system on the face of the navigational instrument and aligns the reference element on a given entry determining element with a directional heading associated with an entry environment (such as a holding pattern or a runway traffic pattern). Through such an alignment, an initial position of the aircraft is established with respect to the entry environment and the advised course of action is displayed at the bottom of the entry determining element. Since the system of the present disclosure is removably secured to a navigational instrument on the aircraft (which the pilot will be regularly consulting during aircraft operation) the attention of the pilot is not diverted away from the aircraft and other hazards (such as other aircraft) in the vicinity while using the system of the present disclosure. Once again, this feature is not described in the devices described in the '204, '855 and '433 patents.

The device of the '204, '433 and '855 patents are not designed to or capable of being removably secured to the face of a navigational instrument on the aircraft. Each of these devices requires that the pilot perform complex manipulations of the device (without removably securing the device to a navigation instrument) in order to determine the correct entry procedure into an entry environment as discussed above. Therefore, there is no reference cited of record that describes or suggests a navigational assist system capable of being removably secured to the face of a navigational device to obtain the benefits described herein.

Furthermore, the system comprises at least two entry determining elements that are moveably secured to one another so that the entry determining elements are rotatable with respect to one another and that can be removably secured to the face of a navigational instrument of the aircraft (see amended claims 1 and 7). The cited devices fail to disclose this structure. The structure is important as it allows the pilot to view information relating to both holding patterns and runway traffic patterns without manipulating (such as flipping the device over) the system as required in the '204, '855 and '433 patents. The system of the present disclosure provides a separate entry determining element for standard (right hand turns) and non-standard (left hand turns) entry into holding patterns and a single entry determining element for entry into both right and left runaway traffic patterns. In this regard, the system of the present disclosure

## INFORMAL RESPONSE TO OFFICE ACTION

allows the pilot to see all of the entry determining elements at one time. The mounting of the entry determining elements so that they are rotatable to one another and removably secured to the face of a navigational instrument of the aircraft provides an advantage to the device of the present disclosure over that of the devices described in the '204, '855 and '433 patents.

Conclusion

Therefore, the Applicants respectfully suggest that the cited references do not render any of claims 1-28 obvious. Applicants respectfully request that the requested amendments be entered and that a timely Notice of Allowance be issued in this case.

Respectfully Submitted,

T. Gregory Peterson  
Attorney for the Applicant  
Reg. No. 45,587

OF COUNSEL  
Bradley Arant Rose & White LLP  
1819 Fifth Avenue North  
Birmingham, Al 35203-2104  
(205) 521-8084